

STATEMENT OF WORK

Resurface the Car wash station area

PROPERTY OBO-10000

New Compound Embassy

U.S. EMBASSY KHARTOUM, SUDAN

2013

1. Description of Services:

The US Embassy, Khartoum has a requirement to resurface car wash area in the New Embassy Compound (NEC), Khartoum. The construction shall be executed as per drawings, scope of work, specifications and General contract conditions. This project requires an experienced contractor to design and execute the job.

The Contractor shall provide all labor, material tools, equipment, supervision and other related items required to complete the project as per scope of work, specifications and attached drawings.

Contractors are advised to visit the site, verify the existing site conditions to develop their proposal.

2. SUBMITTALS

The contractor shall submit the following

1. Manufacturer's data: Submit complete data on materials including accessories and fittings.
2. Layout Drawings: Submit layouts of all drain trenches, oil/sand interceptor including all required openings.
3. Concrete mix design certificates and testing reports.

3. Scope of Work

1- The contractor shall be responsible to construct a new car wash area (two bays) next to the GSX building. The paved area shall be sloped to the ratio 1: 40. All the effluent water will be directed to the surrounding trench drains as shown in (Att. sheet # 1)

The reinforced concrete pavement shall be at least 20 cm thickness with a double mesh layer of steel reinforcement 16 mm bars @ 20 cm.

Reinforcing Bars: ASTM A 615/A 615M, Grade 420 (Grade 60), deformed.

- The concrete shall be ready mix concrete with the following specs:-
 - a. Maximum Slump: 125 mm.
 - b. Maximum Slump for Concrete Containing High-Range, Water-Reducing Admixture: 200 mm after admixture is added to concrete with 50 mm to 75 mm slump.
 - c. Compressive Strength (28 Days): 30 MPa minimum.
 - d. Maximum Water-Cementitious Materials Ratio: 0.54 for non-air-entrained concrete and 0.45 for air-entrained concrete.

The work shall include excavation of topsoil, the refill works and compaction to achieve a leveled surface. The finish level of the platform shall match the level of the existing curb.

3- The contractor shall place a vapor barrier on the base of the platform.

Vapor Retarder: Polyethylene sheet, ASTM D 4397, not less than 0.20 mm (8 mils) thick.

4- Create expansion joints in slab-on-grade to form panels of patterns. Use saw cuts inserts 6 mm wide by one-fourth of slab depth; provide joints not exceeding 4.0 meters in either direction and located to be conform to bay spacing wherever possible.

5-The size of the two bays shall be around 11 X 10.5 m. The work shall include excavation of topsoil, the refill works and compaction. The finish level of the paved area shall be same texture as surrounding area. The entrance/ exit level shall be sloped to allow the smooth entrance and exit of the vehicles to the car wash area from/ to the street.

6- A brick wall shall be built between the GSX walls and the car wash station. The wall shall be one and half red brick thickness (30 cm) wall lying on 40 cm X 40 cm reinforced concrete beam at the edge of the concrete slab (with six - Ø12 steel bars, with stirrups Ø 8 @ 15 cm). The length of the wall shall be 10.6 meters. The height of the wall shall be 1.2 meters above F.F.L. The mortar will be made from sand and cement to the ratio 5:1. The wall shall be cement plastered and then painted with oil based paint to the match the same color as the GSX walls.

7- The central area, the car washing area, will be surrounded by a network of trench drains as shown in diagram, around 28 meters length. The drains' effluent shall be collected in the oil interceptor; the oil interceptor shall be precast reinforced concrete which can hold maximum liquid capacity of 500 gallons (1.2m X 1 m X 1.6m depth), as of Jensen precast or equivalent , leading to the new reinforced concrete manhole inside the gardener's room as shown in the drawing. The contractor shall follow all the required US and local code regulations to connect the effluent car wash water to the new sewage manhole. (sheet # 3)

8- The trench drains shall be made of reinforced concrete as a part of the slab. The minimum dimensions shall be at least 20 cm width and 15 cm clear depth from top. The slope of the trench shall be at least 0.6 cm per meter. The trench grate shall be made with 1.5 inch leg shaped galvanized steel frames with welded mesh of 12 mm rounded bars, 1 cm is maximum slot openings. The grate shall be painted with simple coat of primer followed by oil based black color paint. The grates shall be installed in standard 50 cm sections. Wash Trench shall comply with ASTM specifications for utility trench.

9- The contractor shall fabricate and install the steel structure covering the car wash. The slope of the roof shall be 1:6 roof pitch (sheet #2).

- The vertical columns shall be made of (nine) HP steel section, (200 X 53). The steel shall be embedded in concrete piers 1m X1mX 1.2m deep. The footing shall be composed of single layer steel bars mesh; each mesh shall be of two layers, 16 mm deformed bars each at 20 cm intervals. The HP sections' columns shall be embedded in the footing and welded to the foundation steel mesh. The HP steel section web exposed sides shall be covered with 3 mm thick of steels to have a square shape finish.
- The main girders and the purlins of the roof truss shall be 6 X 3 cm, 3 mm thick steel rectangular pipes
- The minimum clearance of the shed shall be 4.5 m.
- The corrugated sheets shall be thick heavy duty "American design" with thickness 0.8 mm at least.
- The side steel bracing shall be in the top sides of the outer East- West direction. The bracing shall be 10 X 5 steel rectangular pipes., 3 mm thick
- The whole steel structure shall be coated with a layer of primer and then spray painted with Gloss paint of Sadolin, Jotun or equivalent. The columns shall be black in color, while the corrugated sheets shall be grey in color to match the color of the GSX.

10- The top part shall be covered with netting on the top east, west and south side to avoid exposure to most of the sun rays. The green Knitted Polyethylene mesh cover shall be double layer with high durability fabric. The shade density shall not be less than 80 %. The contractor shall use rebar tie wire to fix the netting. The height of the netting shall cover all the distance from top to 1.5 meters from the ground. The frame work for the netting shall be of 10 X 5 cm steel pipes, 2 mm thick.

11- As a boundary, the contractor shall place curbstones on a base of concrete mix at the east and west sides of the interlocking tiles. The curbstones shall be of NIBCO, or similar finish quality as approved by the COR, with size 45X 25 X 12.5 cm. The grouting will be of mortar cement. The concrete mix shall be of gravel, sand and cement to the ratio of 4:2:1.

12- The contractor shall carry out all earthwork required to finish up the work according to drawings, specs and scope of work. Any deviation shall be approved by the COR before installation.

13- The contractor shall maintain existing utilities indicated to remain and protect them against damage during the project. Damages caused by works, shall be repaired by the contractor at no additional cost to the Government.

14- The contractor shall transport from site all debris, rubbish, and materials resulting from operations and dispose off site on a daily basis in accordance with local regulations.

Conditions of Contract

1. General

This is a firm fixed price turnkey job for the entire work and amount quoted shall include all work described in attached drawing, scope of work and general condition of contract. The lump sum price quoted shall be fixed and nothing extra will be entertained on any account.

Contractor's staff is subject to such restriction for entry and exit as are required by the Embassy's security requirement. Contractor's staff will be subject to security cleared as required by the Embassy.

Contractor shall restore all surfaces disturbed by construction to match with existing finish.

Any deviation from the original contract/scope of work shall be informed to COR before work begins. No additional work or changes will be carried out without a contract modification.

2. Responsibilities of Contractor

Contractor shall be responsible for procuring, supplying, transporting, and providing all labor, materials, tools and plant and equipment etc., required for completion of the work in all respects and as per the scope of the work.

All expenses towards mobilization at site and demobilization including bringing in equipment, workforce and materials, dismantling the equipment, clearing the site etc. shall be deemed to be included in the rates quoted by the contractor against various items of schedule of rates and no separate payment on such expenses shall be entertained.

Contractor shall employ and provide one full time engineer to supervise the project and has experienced of carrying out such type of work.

Contractor shall not proceed with next activity until previous activity will be checked and approved by COR. Contractor shall mentioned all inspection dates in the schedule chart

Contractor should keep the site clean and accessible to Embassy employee all time

3. Specifications

Work under this contract shall be carried out strictly in accordance with specifications attached and will meet US and Local codes.

4. Execution of Work

The Contractors are advised to review the material specifications and scope of work. The Contractor should visit and walk through the site to familiarize themselves with the site conditions to understand the exact quantum of work.

On award of the work, Contractor shall submit all items below via email:

- a. Bar chart within 3 days for approval by the Contracting Officer Representative (COR). All dates and time schedule agreed upon should be strictly adhered to. Contractor shall notify the COR in advance regarding anticipated problems through the project.
- b. Proposed start date
- c. Weekly schedule/activity plan for the duration of the project *prior to the start date*.

For dismantling/blocking or making connection to any existing services or any shut-down, contractor shall inform the COR at least three working days in advance and proceed with the work only after the permission from the COR.

The duration of the project shall be 32 working days.

5. Materials

All materials used on this work shall be new and conforming to the contract specifications as per US and local codes.

Materials shall conform to the latest US Standards specifications as amended to date and carry certification mark. Contractor shall submit material samples and catalog for pre-approval.

All materials used on the project shall be approved by the Contracting Officer Representative (COR) before use. Any changes/substitutes on material shall be approved by COR before proceeding.

6. Storage of Materials

All materials shall be stored in a proper manner protected from natural elements so as to avoid contamination and deterioration.

7. Site Clearance and Cleanup

The Contractor shall clear away all debris and excess materials accumulated at the site and dispose of it away from Embassy premises, maintaining a neat site condition.

On completion of project, Contractor shall remove all surplus materials and leave the site in a broom clean condition.

8. Workmanship

Workers working on the site shall be skilled in their job and have related job experience.

9. Working Hours

Working hours shall be 8:30 A.M. to 4:30P.M Sunday to Thursday. No work shall be done on Fridays, Saturdays and holidays without the prior approval of the Contracting Officer.

10. Security Clearance

The Contractor shall inform and provide in writing transportation details (vehicle registration number, drivers name, and date of delivery) to the COR at least 24 hours in advance for material deliveries.

Contractor shall give workers names at least 3 days in advance to get the security clearance. All the workers shall have an official photo ID or photo ID with the company name on it.

11. Safety

- Contractor is responsible and shall continue management and implementation of a safety and health program throughout construction.

- The Contracting Officer and the Post Occupational Safety and Health Officer [OSHO] reserve the right to suspend work when and where Contractor's safety and health program is considered to be operating in an inadequate or non-complying manner.
- Contractor shall provide all Personal Protective Equipment for the workers as per the requirement of the site. Work will be stopped in case the proper protection equipment is not found with the workers and the lapse of time shall be at the Contractor's expense.
- Contractor will not leave the work site in an unsafe condition or any other condition that might cause injury to personnel, damage to existing work, plants or equipment.
- Contractor will use all safety gadgets e.g. hard hats, cotton gloves and goggles as required on site to avoid the accident.
- Any equipment or work considered dangerous shall be immediately discontinued
- Contractors must demonstrate understanding of their responsibilities under Post Managed Construction Project safety program by addressing hazards in preplanning processes and meetings
- Prior to starting a project, each contractor is required to review the work site and identify hazards that may occur while performing the job.
- Prior to starting a project, the contractor shall contact contracting officer, to ensure they have received pertinent information for the project including requirements for permits, floor plans, utility information, asbestos, lead based paint, and other hazardous materials.
- Per 15 FAM 935, contractors must provide their employees with a safe and healthful condition of employment.
- Contractors are expected to provide a "competent person" to implement site health and safety plan and to oversee its compliance. A competent person is an individual who, by way of training and/or experience, is knowledgeable of applicable standards, is capable of identifying workplace hazards relating to the specific operation, is designated by the employer, and has authority to take appropriate actions.
- The contractor shall be responsible for the removal and/or disposal of hazardous waste generated from the project. Hazardous waste generated from the project must be removed and disposed of in accordance with the Department's Hazardous Waste Management Policy as well as local rules and regulations.
- The contractor shall ensure proper safety, health and environmental requirements of EM 385-1-1 applicable to their project as followed.
- The contractor shall ensure individuals working at the site are trained and are aware of potential hazards. Contractors shall ensure that these individuals are provided with proper safety equipment to prevent accidental injury in accordance with the requirements of the contract
- Contractors will report accidents to Contracting officers, Contracting officer's representative and OSHO.

12. Warranty

The contractor shall guarantee that all work performed will be free from all defects in workmanship and materials and that all installation will provide the capacities and characteristics specified. The contract further guarantees that if, during a period of three years from the date of the certificate of completion and acceptance of the work, any such defects will be repaired by the contractor at his expenses.

BOQ- NEC- Resurface the Car Wash Area

	Item	unit	count	unit	unit cost	Total Cost
1	Mobilization	job				
2	Demolition and soil preparation works	job				
3	Foundation works for the columns including steel work	m3	9	1.2		
4	20 cm slab for the car wash	m2	120	1		
5	1.5 brick wall , including 40 X 40 R.C. beam	ML	10.6	1		
6	steel work for the car wash (truss, corrugated sheet cover)	M2	120	1		
7	fabric netting double layer on the sides	job	54	1		
8	drain trench concrete works	ML	27	1		
9	Plumbing works					
10	sand /oil interceptor	M3	2	1		
11	Curbstone works	ML	18	1		
12	Painting	Job		1		